
KATHIE CAMERON, Wilfrid Laurier University
Rainbow Matchings in Bipartite Graphs

Given a graph whose edges are coloured, a rainbow matching is a matching whose edges have distinct colours. We give a polytime algorithm for finding a rainbow perfect matching in a complete bipartite graph where each colour is used for at most three edges. We prove that finding a rainbow perfect matching is NP-hard for 3-regular bipartite graphs where each colour is used for at most two edges. This is joint work with Ashkan Aazami.